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BIOS Setup

Introduction

This manual discussed Award™ Setup program built into the ROM BIOS. The Setup program allows users to modify the basic system configuration. This special information is then stored in battery-backed RAM so that it retains the Setup information when the power is turned off.

The Award BIOS™ installed in your computer system's ROM (Read Only Memory) is a custom version of an industry standard BIOS. This means that it supports Intel™ processors input/output system. The BIOS provides critical low-level support for standard devices such as disk drives and serial and parallel ports.

Adding important has customized the Award BIOS™, but nonstandard, features such as virus and password protection as well as special support for detailed fine-tuning of the chipset controlling the entire system.

The rest of this manual is intended to guide you through the process of configuring your system using Setup.

Plug and Play Support

These AWARD BIOS supports the Plug and Play Version 1.0A specification. ESCD (Extended System Configuration Data) write is supported.

EPA Green PC Support

This AWARD BIOS supports Version 1.03 of the EPA Green PC specification.

APM Support

These AWARD BIOS supports Version 1.1&1.2 of the Advanced Power Management (APM) specification. Power management features are implemented via the System Management Interrupt (SMI). Sleep and Suspend power management modes are supported. This AWARD BIOS can manage power to the hard disk drives and video monitors.

PCI Bus Support

This AWARD BIOS also supports Version 2.1 of the Intel PCI (Peripheral Component Interconnect) local bus specification.

DRAM Support

SDRAM (Synchronous DRAM) are supported.

Supported CPUs

This AWARD BIOS supports the Intel™ CPU.

Using Setup

In general, you use the arrow keys to highlight items, press <Enter> to select, use the <PgUp> and <PgDn> keys to change entries, press <F1> for help and press <Esc> to quit. The following table provides more detail about how to navigate in the Setup program by using the keyboard.

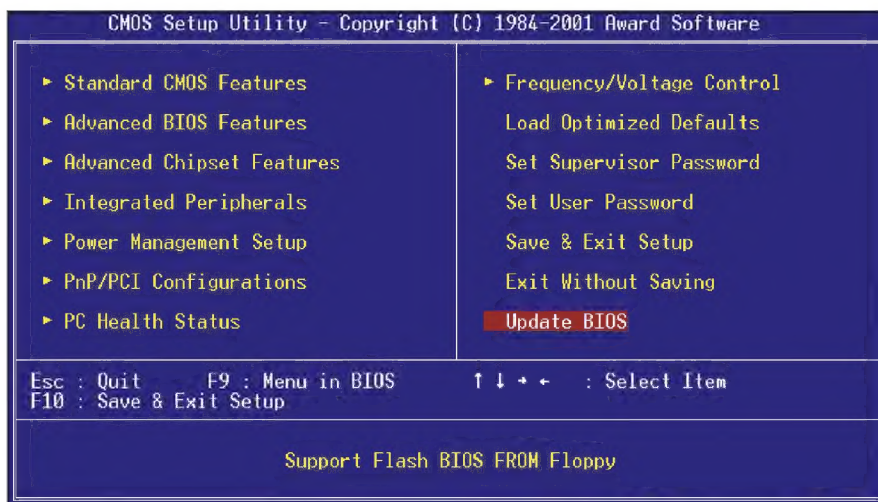
| Keystroke | Function |
|-------------|---|
| Up arrow | Move to previous item |
| Down arrow | Move to next item |
| Left arrow | Move to the item on the left (menu bar) |
| Right arrow | Move to the item on the right (menu bar) |
| Esc | Main Menu: Quit without saving changes Submenus: Exit Current page to the next higher level menu |
| Move Enter | Move to the item you desired |
| PgUp key | Increase the numeric value or make changes |
| PgDn key | Decrease the numeric value or make changes |
| + Key | Increase the numeric value or make changes |
| - Key | Decrease the numeric value or make changes |
| F1 key | General help on Setup navigation keys |
| F5 key | Load previous values from CMOS |
| F7 key | Load the optimized defaults |
| F10 key | Save all the CMOS changes and exit |

Main Menu

Once you enter Award BIOS™ CMOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup functions. Use the arrow keys to select among the items and press <Enter> to accept and enter the sub-menu.

The information about BIOS defaults on manual is just for reference; please refer to the BIOS installed on board, for update information.

■ Figure 1. Main Menu



Standard CMOS Features

This submenu contains industry standard configurable options.

Advanced BIOS Features

This submenu allows you to configure enhanced features of the BIOS.

Advanced Chipset Features

This submenu allows you to configure special chipset features.

Integrated Peripherals

This submenu allows you to configure certain IDE hard drive options and Programmed Input/ Output features.

Power Management Setup

This submenu allows you to configure the power management features.

PnP/PCI Configurations

This submenu allows you to configure certain "Plug and Play" and PCI options.

PC Health Status

This submenu allows you to monitor the hardware of your system.

Frequency/Voltage Control

This submenu allows you to change CPU clock ratio.

(However, when you try to change different CPU clock ratio, you should check your CPU frequency in advance. The CPU clock ratio should be changed depending on your CPU frequency.)

Load Optimized Defaults

This selection allows you to reload the BIOS when the system is having problems particularly with the boot sequence. These configurations are factory settings optimized for this system. A confirmation message will be displayed before defaults are set.



Load Optimized Defaults (Y/N)? N

Set Supervisor Password

Setting the supervisor password will prohibit everyone except the supervisor from making changes using the CMOS Setup Utility. You will be prompted with to enter a password.



Enter Password:

Set User Password


If the Supervisor Password is not set, then the User Password will function in the same way as the Supervisor Password. If the Supervisor Password is set and the User Password is set, the "User" will only be able to view configurations but will not be able to change them.

A screenshot of a BIOS setup screen. It features a dark red background with a white rectangular border. Inside the border, the text "Enter Password:" is displayed in a white, monospaced font.**Save & Exit Setup**

Save all configuration changes to CMOS(memory) and exit setup. Confirmation message will be displayed before proceeding.

A screenshot of a BIOS setup screen. It features a dark red background with a white rectangular border. Inside the border, the text "SAVE to CMOS and EXIT (Y/N)? Y" is displayed in a white, monospaced font.**Exit Without Saving**

Abandon all changes made during the current session and exit setup. Confirmation message will be displayed before proceeding.

A screenshot of a BIOS setup screen. It features a dark red background with a white rectangular border. Inside the border, the text "Quit Without Saving (Y/N)? N" is displayed in a white, monospaced font.**Update BIOS**

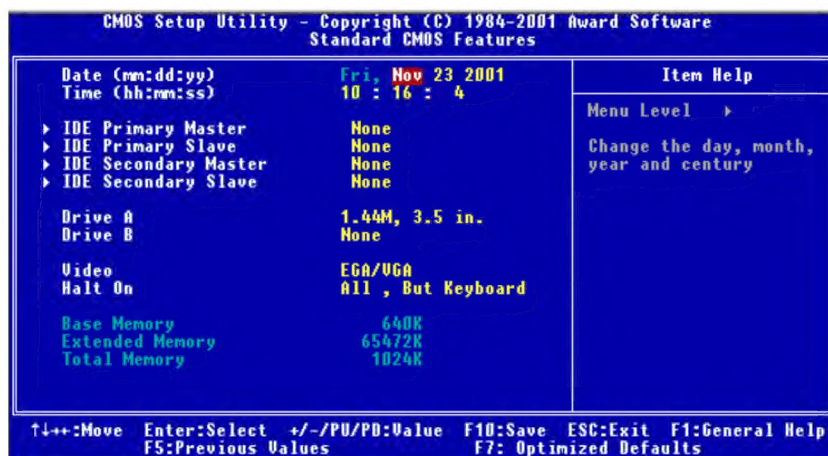
This submenu allows you to update bios.

A screenshot of a BIOS setup screen. It features a dark red background with a white rectangular border. Inside the border, the text "BIOS UPDATE UTILITY (Y/N)? N" is displayed in a white, monospaced font.

Standard CMOS Features

The items in Standard CMOS Setup Menu are divided into 10 categories. Each category includes no, one or more than one setup items. Use the arrow keys to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.

■ Figure 2. Standard CMOS Setup



Main Menu Selections

This table shows the selections that you can make on the Main Menu.

| Item | Options | Description |
|----------------------|---|--|
| Date | MM DD YYYY | Set the system date. Note that the 'Day' automatically changes when you set the date. |
| IDE Primary Master | Options are in its sub menu. | Press <Enter> to enter the sub menu of detailed options |
| IDE Primary Slave | Options are in its sub menu. | Press <Enter> to enter the sub menu of detailed options. |
| IDE Secondary Master | Options are in its sub menu. | Press <Enter> to enter the sub menu of detailed options. |
| IDE Secondary Slave | Options are in its sub menu. | Press <Enter> to enter the sub menu of detailed options. |
| Drive A | 360K, 5.25 in 1.2M, 5.25 in 720K, 3.5 in 1.44M, 3.5 in 2.88M, 3.5 in | Select the type of floppy disk drive installed in your system. |
| Drive B | None | |
| Video | EGA/VGA CGA 40 CGA 80 MONO | Select the default video device. |
| Halt On | All Errors No Errors All, but Keyboard All, but Diskette All, but Disk/ Key | Select the situation in which you want the BIOS to stop the POST process and notify you. |
| Base Memory | N/A | Displays the amount of conventional memory detected during boot up. |
| Extended Memory | N/A | Displays the amount of extended memory detected during boot up. |
| Total Memory | N/A | Displays the total memory available in the system. |

Advanced BIOS Features

■ Figure 3. Advanced BIOS Setup



Virus Warning

This option allows you to choose the VIRUS Warning feature that is used to protect the IDE Hard Disk boot sector. If this function is enabled and an attempt is made to write to the boot sector, BIOS will display a warning message on the screen and sound an alarm beep.

The Choices: **Disabled** (default) Virus protection is disabled.
 Enabled Virus protection is activated.

CPU L1 & L2 Cache

This item allows you to Enabled/ Disabled CPU L1/ L2 Cache.

The Choices: **Enabled** (default), Disabled.

CPU L2 Cache ECC Checking

This item allows you to enable/disable CPU L2 Cache ECC Checking.

The Choices: **Enabled** (default), Disabled.

Quick Power On Self Test

Enabling this option will cause an abridged version of the Power On Self-Test (POST) to execute after you power up the computer.

The Choices: **Enabled** (default) Enable quick POST.
Disabled Normal POST.

First /Second/Third/ Boot Other Device

These BIOS attempts to load the operating system from the devices in the sequence selected in these items.

The Choices: Floppy, LS120, HDD-0, SCSI, CDROM, HDD-1, HDD-2, HDD-3, ZIP100, LAN, Disabled.

Swap Floppy Drive

For systems with two floppy drives, this option allows you to swap logical drive assignments.

The Choices: Enabled, **Disabled** (default).

Boot Up Floppy Seek

Enabling this option will test the floppy drives to determine if they have 40 or 80 tracks. Disabling this option reduces the time it takes to boot-up.

The Choices: **Enabled** (default), Disabled.

Boot Up NumLock Status

Selects the NumLock. State after power on.

The Choices: **On** (default) Numpad is number keys.
Off Numpad is arrow keys.

Typematic Rate Setting

When a key is held down, the keystroke will repeat at a rate determined by the keyboard controller. When enabled, the typematic rate and typematic delay can be configured.

The Choices: **Disabled** (default), Enabled.

Typematic Rate (Chars/Sec)

Sets the rate at which a keystroke is repeated when you hold the key down.

The Choices: **6** (default), 8,10,12,15,20,24,30.

Typematic Delay (Msec)

Sets the delay time after the key is held down before it begins to repeat the keystroke.

The Choices: 250 (default), 500,750,1000.

Security Option

This option will enable only individuals with passwords to bring the system online and/or to use the CMOS Setup Utility.

The Choices: **Setup** (default) a password is required to access the Setup Utility only. This will only apply if passwords are set from the Setup main menu.

System A password is required for the system to boot and is also required accessing the Setup Utility.

OS Select For DRAM > 64MB

A choice other than Non-OS2 is only used for OS2 systems with memory exceeding 64MB.

The Choices: **Non-OS2** (default), OS2.

Video BIOS Shadow

Determines whether video BIOS will be copied to RAM for faster execution.

The Choices: **Enabled** (default)
Disabled

Optional ROM is enabled.
Optional ROM is disabled.

Advanced Chipset Features

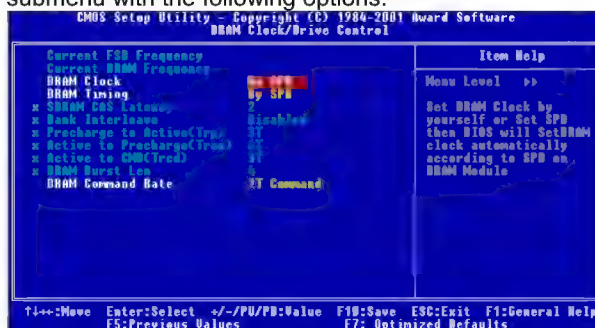
This submenu allows you to configure the specific features of the chipset installed on your system. This chipset manage bus speeds and access to system memory resources, such as DRAM and external cache. It also coordinates communications with the PCI bus. The default settings that came with your system have been optimized and therefore should not be changed unless you are suspicious that the settings have been changed incorrectly.

■ Figure 4. Advanced Chipset Setup



DRAM Clock/Drive Control

To control the Clock/Drive. If you highlight the literal "Press Enter" next to the "DRAM Clock/Drive Control" label and then press the enter key, it will take you a submenu with the following options:



DRAM Clock

This item determines DRAM clock following 100MHz, 133MHz or By SPD.

The Choices: 100MHz, 133MHz, **By SPD** (default).

DRAM Timing

This item determines DRAM clock/ timing follow SPD or not.

The Choices: **By SPD** (default), Manual.

DRAM Command Rate

This item controls clock cycle that must occur between the last valid write operation and the next command.

The Choices: 1T Command, **2T Command** (default).

AGP & P2P Bridge Control

If you highlight the literal "Press Enter" next to the "AGP & P2P Bridge Control" label and then press the enter key, it will take you a submenu with the following options:

**AGP Aperture Size**

Select the size of the Accelerated Graphics Port (AGP) aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation.

The Choices: **64M** (default), 256M, 128M, 32M, 16M, 8M, 4M.

AGP Mode

This item allows you to select the AGP Mode.

The Choices: **4X** (default), 2X, 1X.

AGP Driving Control

By choosing "Auto" the system BIOS will the AGP output Buffer Drive strength P Ctrl by AGP Card. By choosing "Manual", it allows user to set AGP output Buffer Drive strength P Ctrl by manual.

The Choices: Auto (default), Manual.

AGP Driving Value

While AGP driving control item set to "Manual", it allows user to set AGP driving.

The Choices: DA (default).

AGP Fast Write

The Choices: Enabled, Disabled (default).

AGP Master 1 WS Write

When Enabled, writes to the AGP (Accelerated Graphics Port) are executed with one wait states.

The Choices: Disabled (default), Enabled.

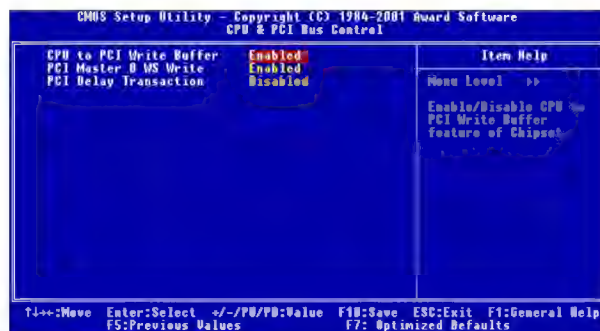
AGP Master 1 WS Read

When Enabled, read to the AGP (Accelerated Graphics Port) are executed with one wait states.

The Choices: Disabled (default), Enabled.

CPU & PCI Bus Control

If you highlight the literal "Press Enter" next to the "CPU & PCI Bus Control" label and then press the enter key, it will take you a submenu with the following options:



CPU to PCI Write Buffer

When enabled, up to four Dwords of data. Can be written to the PCI bus without interrupting the CPU. When disabled, a write buffer is not used and the CPU read cycle will not be completed until the PCI bus signals that it is ready to receive the data.

The Choices: Enabled (default), Disabled.

PCI Master 0 WS Write

When "Enabled", writes to the PCI bus are executed with zero-wait states.

The Choices: **Enabled** (default), Disabled.

PCI Delay Transaction

The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select Enabled to support compliance with PCI specification.

The Choices: **Disabled** (default), Enabled.

Memory Hole

When enabled, you can reserve an area of system memory for ISA adapter ROM. When this area is reserved, it cannot be cached. Refer to the user documentation of the peripheral you are installing for more information.

The Choices: **Disabled** (default), Enabled.

System BIOS Cacheable

Selecting the "Enabled" option allows caching of the system BIOS ROM at F0000h-FFFFFh, which can improve system performance. However, any programs writing to this area of memory will cause conflicts and result in system errors.

The Choices: Enabled, **Disabled** (default).

Video RAM Cacheable

Enabling this option allows caching of the video RAM, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

The Choices: Enabled, **Disabled** (default).

Delay Prior to Thermal

The time periods would correspond to the amount of time required to boot various supported configurations. Example selections include 4, 8, 16, 32 minutes. The watchdog timer would generate an SMI, presenting the BIOS an opportunity to enable the TCC in non-ACPI compliant operating systems.

The Choices: **16 Min** (default), 4 Min, 8Min, 32Min.

VGA Share Memory Size

This item allows you to select the VGA share memory size.

The Choices: **32M** (default), 16M, Disabled.

FB Address Conversion

Setting this bit further optimizes the MA table for VGA frame buffer accesses according to the DRAM page size in use. Setting this should improve VGA performance especially in tiling address mode. This bit cannot be used the same time as CPU Direct Access FB mode. If used, this bit must be set before enabling the internal VGA to prevent display corruption.

The Choices: Enabled, **Disabled** (default).

FB Page Close Prediction

This feature automatically close the FB DRAM pages that are no longer needed in tiling address mode. This bit can be set / cleared any time. This feature will show maximum performance increase if frame buffer address conversion is also enabled.

The Choices: Enabled, **Disabled** (default).

Integrated Peripherals

■ Figure 5. Integrated Peripherals



Onboard PCI LAN (Optional)

This item allows you to enable or disabled the onboard PCI LAN function.

The Choices: Enabled (default), Disabled.

Onboard Lan Boot ROM (Optional)

This item allows you to decide whether to invoke the boot ROM of the onboard LAN chip.

The Choices: Enabled (default), Disabled.

VIA OnChip IDE Device

If you highlight the literal "Press Enter" next to the "VIA OnChip IDE Device" label and then press the enter key, it will take you a submenu with the following options:

OnChip IDE Channel 0/1

The motherboard chipset contains a PCI IDE interface with support for two IDE channels. Select "Enabled" to activate the first and/or second IDE interface. Select "Disabled" to deactivate an interface if you are going to install a primary and/or secondary add-in IDE interface.

The Choices: Enabled (default), Disabled.

IDE Prefetch Mode

The "onboard" IDE drive interfaces supports IDE prefetching for faster drive access. If the interface does not support prefetching. If you install a primary and/or secondary add-in IDE interface, set this option to "Disabled".

The Choices: **Enabled** (default), Disabled.

Primary / Secondary /Master / Slave PIO

The IDE PIO (Programmed Input / Output) fields let you set a PIO mode (0-4) for each of the IDE devices that the onboard IDE interface supports. Modes 0 to 4 will increased performance progressively. In Auto mode, the system automatically determines the best mode for each device.

The Choices: **Auto** (default), Mode0, Mode1, Mode2, Mode3, Mode4.

Primary / Secondary /Master / Slave UDMA

Ultra DMA/100 functionality can be implemented if it is supported by the IDE hard drives in your system. As well, your operating environment requires a DMA driver (Windows 95 OSR2 or a third party IDE bus master driver). If your hard drive and your system software both support Ultra DMA/100, select Auto to enable BIOS support.

The Choices: **Auto** (default), Disabled.

VIA OnChip PCI Device

If you highlight the literal "Press Enter" next to the "VIA OnChip PCI Device" label and then press the enter key, it will take you a submenu with the following options:

VIA-3058 AC97 Audio

This option allows you to control the onboard AC97 audio.

The Choices: **Auto** (default), Disabled.

VIA-3068 MC97 Modem

This option allows you to control the onboard MC97 modem.

The Choices: **Auto** (default), Disabled.

VIA-3043 OnChip LAN

This option allows you to control the onboard LAN.

The Choices: **Auto** (default), Disabled.

Super IO Device

If you highlight the literal "Press Enter" next to the "Super IO Device" label and then press the enter key, it will take you a submenu with the following options:

Onboard FDC Controller

Select Enabled if your system has a floppy disk controller (FDC) installed on the system board and you wish to use it. If install and FDC or the system has no floppy drive, select Disabled in this field.

The Choices: Enabled (default), Disabled.

Onboard Serial Port 1

Select an address and corresponding interrupt for the first and second serial ports.

The Choices: Disabled, **3F8/IRQ4** (default), 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, Auto.

Onboard Serial Port 2

Select an address and corresponding interrupt for the first and second serial ports.

The Choices: Disabled (default), 2F8/IRQ3, 3F8/IRQ4, 3E8/IRQ4, 2E8/IRQ3, Auto.

UART Mode Select

This item allows you to determine which Infrared (IR) function of onboard I/O chip.

The Choices: AS KIR, IrDA (default).

RxD, TxD Active

This item allows you to determine which Infrared (IR) function of onboard I/O chip.

The Choices: Hi / Lo (default), Hi / Hi, Lo / Hi, Lo / Lo.

IR Transmission Delay

This item allows you to enable/disable IR transmission delay.

The Choices: Enabled (default), Disabled.

UR2 Duplex Mode

Select the value required by the IR device connected to the IR port. Full-duplex mode permits simultaneous two-direction transmission. Half-duplex mode permits transmission in one direction only at a time.

The Choices: Half (default), Full.

Use IR Pins

Consult your IR peripheral documentation to select the correct setting of the TxD and RxD signals.

The Choices: **IR-Rx2Tx2** (default), Rx2D, Tx2D.

Onboard Parallel Port

This item allows you to determine access onboard parallel port controller with which I/O Address.

The Choices: **378/IRQ7** (default), 278/IRQ5, 3BC/IRQ7, Disabled.

Parallel Port Mode

The default value is SPP.

The Choices:

| | |
|----------------------|--|
| SPP (default) | Using Parallel port as Standard Printer Port. |
| EPP | Using Parallel Port as Enhanced Parallel Port. |
| ECP | Using Parallel port as Extended Capabilities Port. |
| ECP+EPP | Using Parallel port as ECP & EPP mode. |

EPP Mode Select

Select EPP port type 1.7 or 1.9.

The Choices: **EPP 1.7**(default), EPP1.9.

ECP Mode Use DMA

Select a DMA Channel for the port.

The Choices: **3** (default), 1.

Game Port Address

Game Port I/O Address.

The Choices: **201** (default), 209, Disabled.

Midi Port Address

Midi Port Base I/O Address.

The Choices: **330** (default), 300, 290, Disabled.

Midi Port IRQ

This determines the IRQ in which the Midi Port can use.

The Choices: 5, **10** (default).

Init Display First

With systems that have multiple video cards, this option determines whether the primary display uses a PCI Slot or an AGP Slot.

The Choices: **PCI Slot** (default), AGP.

OnChip USB Controller

This option should be enabled if your system has a USB installed on the system board. You will need to disable this feature if you add a higher performance controller.

The Choices: **All Enabled** (default), All Disabled.

USB Keyboard Support

Enables support for USB attached keyboards.

The Choices: **Disabled** (default), Enabled.

IDE HDD Block Mode

Block mode is otherwise known as block transfer, multiple commands, or multiple sector read/write. Select the "Enabled" option if your IDE hard drive supports block mode (most new drives do). The system will automatically determine the optimal number of blocks to read and write per sector.

The Choices: **Enabled** (default), Disabled.

Power Management Setup

The Power Management Setup Menu allows you to configure your system to utilize energy conservation and power up/power down features.

■ Figure 6. Power Management Setup



ACPI function

This item displays the status of the Advanced Configuration and Power Management (ACPI).

The Choices: Enabled (default), Disabled.

ACPI Suspend Type

The item allows you to select the suspend type under the ACPI operating system.

The Choices: S1 (POS) (default) Power on Suspend
S3 (STR) Suspend to RAM

Power Management Option

This category allows you to select the type (or degree) of power saving and is directly related to the following modes:

1. HDD Power Down.
2. Suspend mode.

There are four options of Power Management, three of which have fixed mode settings

Min. Power Saving

Minimum power management.
Suspend Mode = 1 hr.

Max. Power Saving

Maximum power management only available for sl CPU's.
Suspend Mode = 1 min.

User Defined (default)

It allows you to set each mode individually.
When not disabled, each of the ranges is from 1 min. to 1 hr. except for HDD Power Down which ranges from 1 min. to 15 min. and disable.

HDD Power Down

When enabled, the hard disk drive will power down and after a set time of system inactivity. All other devices remain active.

The Choices: **Disabled** (default), 1 Min, 2 Min, 3 Min, 4 Min, 5 Min, 6 Min, 7 Min, 8 Min, 9 Min, 10 Min, 11 Min, 12 Min, 13 Min, 14 Min, 15Min.

Suspend Mode

The item allows you to select the suspend type under ACPI operating system.

The Choices: **Disabled** (default), 1 Min, 2 Min, 4 Min, 6 Min, 8 Min, 10 Min, 20 Min, 30 Min, 40 Min, 1 Hour.

Video Off Option

This field determines when to activate the video off feature for monitor power management.

The Choices: **Suspend→Off** (default), Always on.

Video Off Method

This option determines the manner in which the monitor is goes blank.

V/H SYNC+Blank (default)

This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.

Blank Screen

This option only writes blanks to the video buffer.

DPMS Support

Initial display power management signaling.

Modem Use IRQ

This determines the IRQ, which can be applied in MODEM use.

The Choices: 3 (default), 4 / 5 / 7 / 9 / 10 / 11 / NA.

Soft-Off by PWRBTN

Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state when the system has "hung."

The Choices: Delay 4 Sec, **Instant-Off** (default).

IRQ/Event Activity Detect

If you highlight the literal "Press Enter" next to the "IRQ/Event Activity Detect" label and then press the enter key, it will take you a submenu with the following options:

VGA

When set to "**On**", any event occurring at a VGA Port will awaken a system, which has been powered down.

The Choices: **OFF** (default), On.

LPT & COM

When this option is set to "**On**", any event occurring at a COM (serial)/LPT (printer) port will awaken a system which has been powered down.

The Choices: **LPT/COM** (default), COM, LPT, NONE.

HDD & FDD

When this option is set to "**On**", any event occurring on a hard drive or a floppy drive will awaken a system, which has been powered down.

The Choices: **On** (default), Off.

PCI Master

When set to "**On**", you need a LAN add-on card, which supports the power function. It should also support the wake-up on LAN jump.

The Choices: **OFF** (default), On.

Power On by PCI Card

When you select Enabled, a PME signal from PCI card returns the system to Full ON state.

The Choices: **Disabled** (default), Enabled.

Wake Up On LAN/Ring

To use this function, you need a LAN add-on card which support power on function. It should also support the wake-up on LAN jump.

The Choices: **Disabled** (default) Wake up on LAN/Ring not supported.
Enabled Wake up on LAN/Ring supported.

RTC Alarm Resume

When "Enabled", you can set the date and time at which the RTC (real-time clock) alarm awakens the system from Suspend mode.

The Choices: Enabled, **Disabled** (default).

Date (of Month)

You can choose which month the system will boot up. This field is only configurable when "RTC Resume" is set to "Enabled".

Resume Time (hh:mm:ss)

You can choose the hour, minute and second the system will boot up. This field is only configurable when "RTC Resume" is set to "Enabled".

IRQs Activity Monitoring

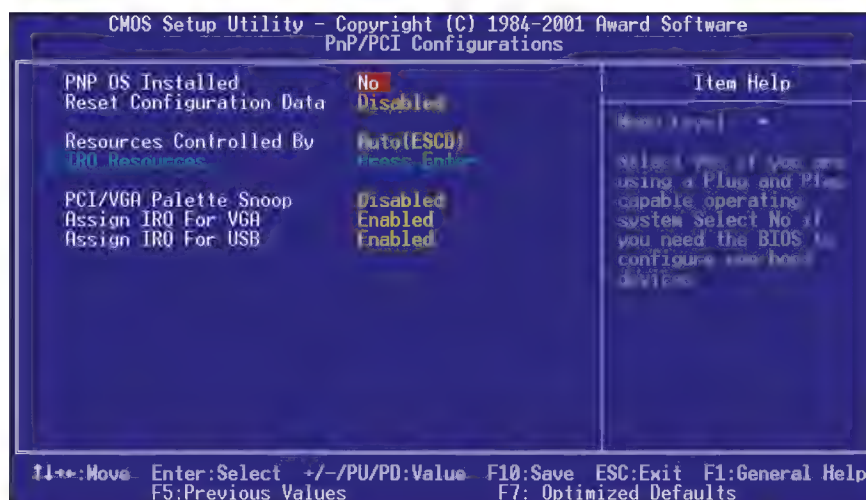
Press Enter to access another sub menu used to configure the different wake up events (i.e. wake on LPT & COMM activity).

| | |
|---------------------|----------|
| Primary INTR | ON |
| IRQ3 (COM 2) | Disabled |
| IRQ4 (COM 1) | Enabled |
| IRQ5 (LPT 2) | Enabled |
| IRQ6 (Floppy Disk) | Enabled |
| IRQ7 (LPT 1) | Enabled |
| IRQ8 (RTC Alarm) | Disabled |
| IRQ9 (IRQ2 Redir) | Disabled |
| IRQ10 (Reserved) | Disabled |
| IRQ11 (Reserved) | Disabled |
| IRQ12 (PS/2 Mouse) | Enabled |
| IRQ13 (Coprocessor) | Enabled |
| IRQ14 (Hard Disk) | Enabled |
| IRQ15 (Reserved) | Disabled |

PnP/PCI Configurations

This section describes configuring the PCI bus system. PCI, or Personal Computer Interconnect, is a system, which allows I/O devices to operate at speeds nearing the speed of the CPU itself uses when communicating with its own special components. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

■ Figure 7. PnP/PCI Configurations



PNP OS Installed

When set to YES, BIOS will only initialize the PnP cards used for the boot sequence (VGA, IDE, SCSI). The rest of the cards will be initialized by the PnP operating system like Window™ 95. When set to NO, BIOS will initialize all the PnP cards. For non-PnP operating systems (DOS, Netware™), this option must set to NO.

The Choices: No (default), Yes.

Reset Configuration Data

The system BIOS supports the PnP feature, which requires the system to record which resources are assigned and protects resources from conflict. Every peripheral device has a node, which is called ESCD. This node records which resources are assigned to it. The system needs to record and update ESCD to the memory locations. These locations (4K) are reserved in the system BIOS. If the Disabled (default) option is chosen, the system's ESCD will update only when the new configuration varies from the last one. If the Enabled option is chosen, the system is forced to update ESCDs and then is automatically set to the "Disabled" mode.

| | |
|--------|----------------------------|
| IRQ-3 | assigned to: PCI / ISA PnP |
| IRQ-4 | assigned to: PCI / ISA PnP |
| IRQ-5 | assigned to: PCI / ISA PnP |
| IRQ-7 | assigned to: PCI / ISA PnP |
| IRQ-9 | assigned to: PCI / ISA PnP |
| IRQ-10 | assigned to: PCI / ISA PnP |
| IRQ-11 | assigned to: PCI / ISA PnP |
| IRQ-12 | assigned to: PCI / ISA PnP |
| IRQ-14 | assigned to: PCI / ISA PnP |
| IRQ-15 | assigned to: PCI / ISA PnP |
| DMA-0 | assigned to: PCI / ISA PnP |
| DMA-1 | assigned to: PCI / ISA PnP |
| DMA-3 | assigned to: PCI / ISA PnP |
| DMA-5 | assigned to: PCI / ISA PnP |
| DMA-6 | assigned to: PCI / ISA PnP |
| DMA-7 | assigned to: PCI / ISA PnP |

The above settings will be shown on the screen only if "Manual" is chosen for the resources controlled by function.

Legacy is the term, which signifies that a resource is assigned to the ISA Bus and provides non-PnP ISA add-on cards. PCI / ISA PnP signifies that a resource is assigned to the PCI Bus or provides for ISA PnP add-on cards and peripherals.

The Choices: Disabled (default), Enabled.

Resources Controlled By

By Choosing "Auto" (default), the system BIOS will detect the system resources and automatically assign the relative IRQ and DMA channel for each peripheral. By Choosing "Manual", the user will need to assign IRQ & DMA for add-on cards. Be sure that there are no IRQ/DMA and I/O port conflicts.

The Choices: Auto (ESCD) (default), Manual.

IRQ Resources

This submenu will allow you to assign each system interrupt a type, depending on the type of device using the interrupt. When you press the "Press Enter" tag, you will be directed to a submenu that will allow you to configure the system interrupts. This is only configurable when "Resources Controlled By" is set to "Manual".

PCI / VGA Palette Snoop

Choose Disabled or Enabled. Some graphic controllers, which are not VGA compatible, take the output from a VGA controller and map it to their display as a way to provide boot information and VGA compatibility.

However, the color information coming from the VGA controller is drawn from the palette table inside the VGA controller to generate the proper colors, and the graphic controller needs to know what is in the palette of the VGA controller. To do this, the non-VGA graphic controller watches for the Write access to the VGA palette and registers the snoop data. In PCI based systems, where the VGA controller is on the PCI bus and a non-VGA graphic controller is on an ISA bus, the Write Access to the palette will not show up on the ISA bus if the PCI VGA controller responds to the Write.

In this case, the PCI VGA controller should not respond to the Write, it should only snoop the data and permit the access to be forwarded to the ISA bus. The non-VGA ISA graphic controller can then snoop the data on the ISA bus. Unless you have the above situation, you should disable this option.

The Choices: **Disabled** (default), Enabled.

Assign IRQ For VGA

This item allows the users to choose which IRQ to assign for the VGA.

The Choices: **Enabled** (default), Disabled.

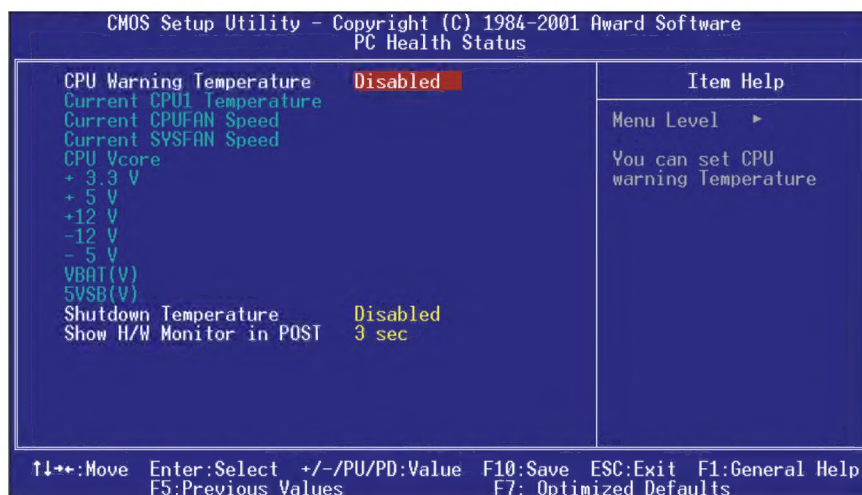
Assign IRQ For USB

This item allows the users to choose which IRQ to assign for the USB.

The Choices: **Enabled** (default), Disabled.

PC Health Status

■ Figure 8. PC Health Status



CPU Warning Temperature

This item allows you to set the warning temperature of the CPU in order not to be damaged by the overheated temperature. When this function is enabled, the system will warn you if the CPU temperature reaches the warning temperature.

The Choices: Disabled (default), 50°C/122°F, 53°C/127°F, 56°C/133°F, 60°C/140°F, 63°C/145°F, 66°C/151°F, 70°C/158°F.

Current CPU1 Temperature

This field displays the current temperature of CPU.

Current CPUFAN Speed

This field displays the current speed of CPU fan.

Current SYSFAN Speed

This field displays the current speed SYSTEM fan.

CPU Vcore +3.3V, +5V, +12V, -12V, -5V, VBAT(V), 5VSB(V)

Detect the system's voltage status automatically.

Shutdown Temperature

This item allows you to set the shutdown temperature of the CPU in order not to be damaged by the overheated temperature. When this function is enabled, the system will automatically shutdown if the CPU temperature reaches the shutdown temperature. This function only works under Windows 98 ACPI mode.

The Choices: Disabled (default), 60°C/140°F, 65°C/149°F, 70°C/158°F, 75°C/167°F.

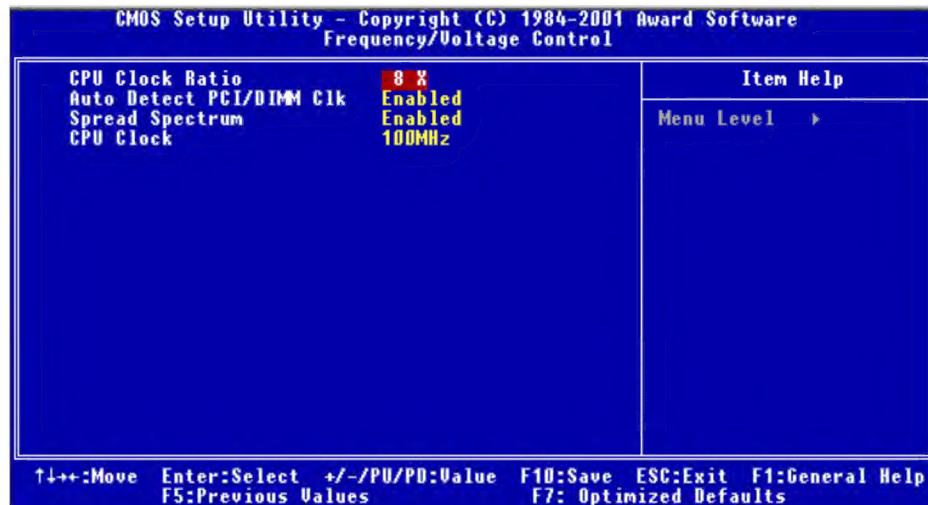
Show H/W Monitor in POST

If your computer contains a monitoring system, it will show PC health status during POST stage. The item offers several delay time for you to choose.

The Choices: None, 1sec, 2sec, **3 sec** (default).

Frequency/Voltage Control

■ Frequency/Voltage Control



Auto Detect PCI / DIMM Clk

This item allows you to enable/disable auto detect DIMM/PCI Clock.

The Choices: Enabled (default), Disabled.

Spread Spectrum

This item allows you to enable/disable the Spread Spectrum function.

The Choices: Enabled (default), Disabled.

CPU Clock

This item allows you to select CPU Host Clock.

The Choices: 100MHz (Min) (default) ~ 132MHz (Max).

CPU Clock Ratio

This item allows you to select the CPU Ratio.

The Choices: **X8** (default), X9, X10, X11, X12, X13, X14, X15, X16, X17, X18, X19, X20, X21, X22, X23.

If unfortunately, the system's frequency that you are selected is not functioning, there are two methods of booting-up the system.

Method 1: Clear the CMOS data by setting the JCMOS1 ((2-3) closed)) as "ON" status. All the CMOS data will be loaded as defaults setting.

Method 2: Press the <Insert> key and Power button simultaneously, after that keep-on pressing the <Insert> key until the power-on screen showed. This action will boot-up the system according to FSB of the processor.